

Claims

I claim:

Claim 1. A protective barrier device for protecting frangible portions of a structure from wind force and wind born objects comprising at least one panel of flexible mesh material with a burst strength greater than 61.3 psi and an interstice size preventing passage of wind born objects greater than 3/16 inch diameter, approximately, said panel including a peripheral hem adapted to secure said panel to said structure whereby said panel is spaced apart from said structure a minimum deflection distance to allow for deceleration of objects impacting said panel before the objects impact the frangible portions of said structure.

Claim 2. A protective barrier according to claim 1 wherein said panel is a textile formed from synthetic threads.

Claim 3. A protective barrier according to claim 2 wherein said textile is resistant to ultra violet, biological, and chemical degradation.

Claim 4. A protective barrier according to claim 2 wherein said textile is polypropylene.

1 Claim 5. A protective barrier according to claim 2
2 wherein said textile is vinyl-coated polyester.

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4 Claim 6. A protective barrier according to claim 1
5 wherein said panel is transparent.

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7 Claim 7. A protective barrier according to claim 1
8 wherein said panel includes a superposed layer of continuous
9 film.

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11 Claim 8. A protective barrier according to claim 1
12 wherein said peripheral hem has a plurality of releasable
13 fasteners, some of said fasteners adapted to attach to ground
14 anchors to secure said panel spaced apart from said structure.

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16 Claim 9. A protective barrier according to claim 1
17 wherein said barrier includes a plurality of said panels, said
18 panels having parallel edges adapted to be releasably
19 connected, said edges having cooperating releasable fasteners
20 spaced therealong.

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22 Claim 10. A protective barrier according to claim 9
23 wherein said spaced fastenings are reinforced with a tape means
24 attached to the material in a butterfly pattern.

1 Claim 11. A protective barrier according to claim 10
2 wherein said tape is polypropylene.

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4 Claim 12. A protective barrier according to claim 9
5 wherein said spaced fastenings are set in from an edge of
6 said curtain means to cause said edge to extend past inset
7 fasteners to eliminate any gap that may otherwise exist between
8 the edge and an attaching means.

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10 Claim 13. A protective barrier device for protecting
11 frangible portions of a structure from the force of wind and
12 wind born objects comprising at least one panel of flexible
13 mesh material having a maximum deflection of approximately 20%
14 before failure and air permeability of approximately 250 cfm at
15 a wind force of 1 inch Hg., said panel having an upper edge and
16 a lower edge, said upper edge adapted to attach to said
17 structure and said lower edge adapted to attach to the ground
18 in such a manner to provide a minimum deflection distance
19 between said structure and said panel greater than said maximum
20 deflection distance of said panel.

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22 Claim 14. A protective barrier according to claim 13
23 wherein said minimum deflection distance is calculated
24 according to the steps of:

1 dividing the impact test force by the failure force of
2 said panel to obtain a fraction, the quotient must be less than
3 or equal to 1 for the panel to be acceptable;
4 multiplying said fraction by the known stretch of said
5 panel at failure to obtain a stretch factor;
6 multiplying said stretch factor by the span distance of
7 said panel to obtain a resultant measurement of stretch;
8 adding said resultant measurement of stretch to be added
9 to said span distance to obtain a sum;
10 dividing said sum by 2 to form the hypotenuse of a right
11 triangle, the known side of the right triangle is the span
12 length divided by 2;
13 subtracting the square of the known side from the square
14 of the hypotenuse to obtain the square of the maximum
15 deflection;
16 calculating the square root of said square to obtain a
17 final measurement as the minimum distance said panel is mounted
18 from the frangible portion of said structure being protected.
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20 Claim 15. The protective barrier according to claim 14
21 including a step of allowing for wind pressure comprising;
22 adding the resultant cumulative pressure calculated on a
23 length of said span and on the maximum wind speed to be allowed
24 to said impact test force obtaining a net sum;

1 substituting said net sum of said two forces for said
2 impact test force.

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4 Claim 16. The protective barrier according to claim 13
5 including a step of allowing for curtain means attachment
6 comprising:

7 adding a slack distance to said final measurement, said
8 slack distance solely as a result of anchoring slack, said
9 minimum distance being the sum of said slack distance and said
10 final measurement.

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